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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,113	01/26/2001	Dasari Jagadish Kumar	7416/78222 - PPA 2	6902
24628	7590	11/04/2005	EXAMINER	
WELSH & KATZ, LTD 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606				PHU, PHUONG M
ART UNIT		PAPER NUMBER		
		2631		

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/771,113	KUMAR ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Phuong Phu	2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 25 August 2005.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 13-35 and 40-53 is/are withdrawn from consideration.
- 5) Claim(s) 54-62 is/are allowed.
- 6) Claim(s) 1-12 and 36-39 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                     | Paper No(s)/Mail Date. _____ .  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

## DETAILED ACTION

This Office Action is responsive to the Amendment filed on 8/25/05.

### *Claim Rejections - 35 USC § 103*

1. Claims 1-12 are rejected under 35 U.S.C. 103(a), as being unpatentable over Yip et al in view of Gambuzza (6,226,331), (both previously cited).

-Regarding to claim 1, see figure 1 and col. 2, line 39 to col. 4, line 50, Yip et al discloses a transceiver comprising:

a transmission line interface (12) connected to a transmission line (TWO-WIRE LINE);  
a receiver (including RECEIVE PATH) connected to the transmission line interface; and  
a transmitter (including TRANSMIT PATH) selectively coupled by switch (20) to the transmission line interface;

wherein the when the transmitter is not coupled to the transmission line interface, the transceiver inherently presents a high impedance to the transmission line with respect to the normal line impedance of the transmission line because the transmitter then acts as an open circuit.

Yip et al does not disclose whether the transmitter has an impedance substantially equal to the normal line impedance wherein the transceiver presents an impedance to the transmission line that is substantially equal to the normal line impedance when the transmitter is coupled to the transmission line interface.

Gambuzza discloses a transmission line interface (200) which connects a transmitter and a receiver of a transceiver to a transmission line (212), and includes a matching circuit (R1, R2) to make the impedance of the transmitter and of the receiver match with the impedance of the

transmission line so that the transceiver presents an impedance to the transmission line that is substantially equal to the impedance of the transmission line (see figure 2 and col. 4, lines 34-55).

Since Yip et al does teach in detail how the transmission line interface (12) is implemented, therefore, for an application for implementing the transmission line interface (12), it would have been obvious for a person skilled in the art to implement Yip et al in such a way that the transmission line interface (12) would be implemented as a transmission line interface which include a matching circuit, as taught by Gambuzza, in order to make the impedance of the transmitter substantially equal to the normal line impedance so that the impedance of the transmitter would be matched with the normal line impedance of the transmission line when the transmitter is coupled to the transmission line interface for optimizing the power transfer from the transmitter to the transmission line.

-Regarding to claim 2, Yip et al discloses that the transmitter is selectively coupled to the transmission line by a switch device (20) (see figure 1).

-Regarding to claim 3, Yip et al discloses that the switch device is positioned within the transmitter (see figure 1).

-Regarding to claim 4, Yip et al discloses that the switch device includes mechanical contacts (20) (see figure 1).

--Regarding to claim 5, Yip et al discloses that the switch device includes electromechanical relays (20) to relay path (REF(n)) between path (TRANSMIT PATH) and path (TS(n)) (see figure 1).

-Regarding to claim 6, Yip et al discloses that the switch device is an electronic switch (see figure 1).

-Regarding to claim 7, Yip et al discloses that the switch device includes a filter (14, 16); and further, switch (20) of the switch device inherently operates on a particular operating frequency bandwidth specified by the design of the switch and does not operate beyond that particular operating frequency bandwidth, therefore, the switch can be considered as a filter over that particular operating frequency bandwidth.

-Regarding to claims 8-10, Yip et al in view of Gambuzza does not disclose whether the switch device is manually controllable, automatically controllable by hardware or automatically controllable by software. However, using a switch of manually controllable, automatically controllable by hardware or automatically controllable by software for switching a signal is well-known in the art, and the examiner takes Official Notice. Since Yip et al in view of Gambuzza does not teach in detail how to implement the switch device, therefore, for an application for implementing the switch device in Yip et al invention in view of Gambuzza , it would have been obvious for a person skilled in the art to implement the switch device as a switch manually controllable, automatically controllable by hardware or automatically controllable by software.

-Regarding to claim 11, Yip et al discloses that wherein the transmission line interface is a hybrid circuit (see figure 1).

-Regarding to claim 12, Yip et al in view of Gambuzza does not teach that the transmission line includes bridge taps. However, using bridge taps for a transmission line for future connections with remote stations are well-known in the art, and the examiner takes

Official Notice. It would have been obvious for a person skilled in the art to implement the transmission line of Yip et al invention in view of Gambuzza to include bridge taps for the transmission line in order to make it capable of making future connections with remote transceiver systems.

2. Claims 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yip et al in view of Gambuzza and further in view of Starr (6,324,167), previously cited.

-Regarding to claim 36, as applied to claim 1, Yip et al in view of Gambuzza teaches a system comprising a central office transceiver (PSTN) (see Yip et al, col. 2, lines 45-48), a transmission line (TWO-WIRE LINE) (see Yip et al, figure 1) having a normal impedance, wherein the central office high speed communication transceiver is connected to a first end of the transmission line; a remote transceiver (see Yip et al, figure 1) connected to a second end of the transmission line, the remote transceiver including a first receiver, a transmission line interface, and a transmitter selectively coupled to the transmission line, wherein each remote high speed communication transceiver presents a high impedance to the transmission line with respect to the normal line impedance when the transmitter is not coupled to the transmission line and each remote high speed communication transceiver presents an impedance substantially equal to the normal line impedance to the transmission line when the transmitter is coupled to the transmission line.

Yip et al in view of Gambuzza does not teach that more than one of the remote transceiver being connected to the second end the transmission line.

Starr teaches using a network interface device including a network interface (38) and a splitter (44, 43, 42, 41, 40) for making a connection of a transmission line (36) to plural of transceivers at one end of the transmission line (see col. 2, line 49 to col. 3, line 11).

It would have been obvious for one skilled in the art to implement Yip et al invention in view of Gambuzza in such a way that the transmission line (TWO-WIRE LINE) would be added with a network interface and a splitter, as taught by Starr, for making a connection of the transmission line to more than one of the remote transceiver at one end of the transmission line so that the transmission line would be capable of conveying more communication channels than the one before being implemented.

-Claim 37 is rejected with similar reasons set forth for claim 2.

-Regarding to claim 38, Yip et al in view of Gambuzza and Starr discloses that the transmitter is coupled to the transmission line interface by the first switch and the transmission line interface is connected to the transmission line (see Yip et al, figure 1).

-Claim 39 is rejected with similar reasons set forth for claim 3.

***Allowable Subject Matter***

3. Claims 54-62 are allowed.

***Response to Arguments***

4. Applicant's arguments filed on 8/25/05 have been fully considered but they are not, in part, persuasive.

-The previous objection on Drawings has been withdrawn since the Drawings were amended to overcome the objection.

-Applicant's arguments with respect to the previous rejections to claims 1 and 36 are not persuasive. The applicant mainly argues that Yip et al does not teach that when the transmitter, (which includes (TRANSMIT PATH) (see figure 1)) is not coupled to the transmission line interface (12), the transceiver (the circuit of figure 1) presents a high impedance to the transmission line (TWO-WIRE LINE) with respect to the normal line impedance of the transmission line.

The examiner respectfully disagrees. See figure 1, when the transmitter is not coupled to the transmission line interface, the transmitter is then disconnected from the transmission line. The disconnection makes the path between the output of switch (20) and the output of the transmitter as a non-conducting open circuit, and therefore provides a high impedance between the output of switch (20) and the output of the transmitter. Since the output of the switch is coupled to the transmission line, it can be said that when the transmitter is not coupled to the transmission line interface , the transceiver presents a high impedance between the output of switch (20) and the output of the transmitter to the transmission line with respect to the normal line impedance of the transmission line. In order to clarify that an open circuit between two nodes provides a corresponding high impedance connection between the two nodes, the examiner now cites Dobbeelaere (6,031,388) teaching that in an open circuit between two nodes, the open circuit provides a high impedance between the two nodes (see figure 2, col. 4, line 39, and col. 5, lines 16-22).

Based on the above rationale, it is believed that the limitations of claims are still met and therefore, the rejections are still maintained.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (6:30-2:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2631

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phuong Phu  
11/02/05

**PHUONG PHU**  
**PRIMARY EXAMINER**

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Art Unit 2631